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The Ohio State University Bulletin includes announcements of the University, the colleges of Agriculture and Domestic Science, Arts, Philosophy, and Science, Engineering, Law, Pharmacy, and Veterinary Medicine, the Graduate School, the Summer Term, departments of instruction, and reports of Officers of the University, etc.

Note: In requesting any of the above publications address the Secretary University Faculty, Ohio State University, Columbus, Ohio.

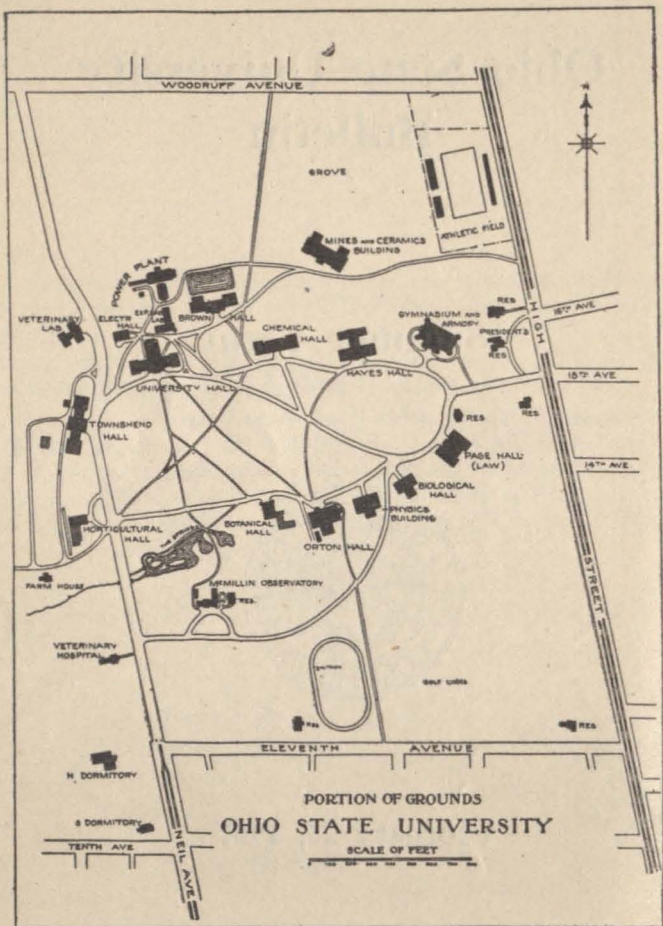
Ohio State University Bulletin

Summer Term



February 28, 1907

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SUMMER TERM

COURSES OF STUDY

AGRICULTURE:

Soil Study,
Plant and Animal Growth.

AMERICAN HISTORY:

The Teaching of American History,
Advanced Political History.

ART:

Theory and Practice of Teaching Art,
Advanced Composition and Design,
Drawing and Painting.

BOTANY:

Elementary Botany,
Botany for Teachers.

CHEMISTRY:

General Chemistry,
Qualitative Analysis,
Advanced Chemistry.

DOMESTIC SCIENCE:

The Teaching of Domestic Science in the Grades,
Theory and Practice of the Teaching of Domestic
Science.

EDUCATION:

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Principles of Education,
History of Education,
Educational Classics,
Secondary Education,
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Primary Grades,
Organization of Manual Training in the Grammar
Grades,
The Teaching of Manual Training in the High School,
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Training.

MATHEMATICS:

Analytical Geometry,
Integral Calculus,
Teachers' Course,
Plane Geometry,
Solid Geometry,
Entrance Algebra.

MECHANICAL DRAWING:

Projection Drawing,
The Teaching of Mechanical Drawing.

PHYSICS:

The Teaching of Physics,
Advanced Laboratory Physics,
College Entrance Physics—Mechanics and Heat,
College Entrance Physics—Sound, Light, and Elec-
tricity.

GENERAL INFORMATION

DAYS AND DATES.—The third Summer Term of the Ohio State University will open Monday, June 24, and close six weeks later, Friday, Aug. 2, 1907. The opening day will be registration day and all persons desiring to enter are urged to enroll at the Registrar's office in University Hall on that day.

COURSES GIVEN IN THE SUMMER TERM.—The following lines of work are offered; a complete review of manual training in the public schools; courses in high school subjects; courses in education; and courses in subjects for which credit will be given towards a degree by the University. There are offered also courses that will enable University students to work off conditions incurred during the current academic year and courses that will enable students not quite prepared to enter the University to make up their deficiencies.

ENTRANCE REQUIREMENTS.—While no definite educational requirements have been prescribed for entrance to the Summer Term, it will be found that certain University courses make necessary some prerequisites. Some courses are for teachers only. A student should be careful to elect such courses as he knows he can carry. Where any doubt exists a conference should be held with the instructor in charge of the course previous to registration.

UNIVERSITY CREDIT.—Credit will be given for work done in the Summer Term for each subject upon the satisfactory completion of the same to the extent indicated in the Announcement of Courses. This credit shall count toward a University degree when the requirements for admission to one of the four year courses have been fulfilled and admission to the corresponding college of the University secured. But no student will be permitted to register for more than nine hours credit in the Summer Term.

DEGREES.—It is the aim of the school to make itself useful to a large number of busy young men and women, who want to make use of their summer vacations in doing

work for credit towards a degree. To this end, a number of University courses are offered with the number of term hours credit indicated.

GRADUATE WORK.—The experience of the previous years leads to the belief that there are a great many college graduates who would like to pursue graduate work during the summer under the direction of some of the departments of the University. Many of the departments will be prepared to supervise such work through the summer and all persons desiring to do graduate work are invited to send for the Graduate Bulletin and to open correspondence with Professor G. W. Knight, chairman of the Administrative Board of the Graduate School.

MANUAL TRAINING.—Twelve hours each day will be given to the study of manual training and drawing and these courses will cover the subject as actually given in our best organized city schools. Mr. Bauersfeld, who will be in charge of the work, is the Director of Manual Training in the Thomas Hoyne Manual Training High School, Chicago, Ill.; Professor Bracken, teacher of Art, was formerly Supervisor of drawing in the Public Schools of Louisville, Ky.; and Mrs. Rollins, who will have charge of the construction work, is Principal of the Sheridan School, Minneapolis, Minn.

HIGH SCHOOL SUBJECTS.—The subjects will be taught with the purpose of presenting the problems and difficulties encountered in the ordinary high school. In these classes, the aim will be to increase the teacher's knowledge of the subject, to set forth the portion of the subject that should have especial study, to emphasize and discuss the difficult portions, and to discover the best methods of teaching. An occasional hour, as circumstances may suggest, will be given to conferences and discussions of the pupils' and teachers' problems in the subject under study.

SUPERINTENDENTS AND PRINCIPALS.—Especial attention will be given to the problems of school administration. The study of school law, of the relation of the school to the community, of the authority of different school officers,

and of the policies which should control supervision offer excellent opportunities for supervising officers to acquaint themselves with the correct solutions of their problems.

EDUCATION.—The courses in education will furnish all teachers opportunities to parallel their more technical work with specific study of the problems which relate to the management and history of schools.

ENGLISH LITERATURE.—Especial emphasis will be placed upon the presentation of English Literature and Composition in order that teachers may be helped in acquiring a full knowledge of their own language and in becoming acquainted with the best methods of presenting it to their pupils. Most of the books used in the class room will be furnished free by the department. Students desiring English work for entrance credit should consult the head of the department.

AGRICULTURE.—This is a study that will train both teacher and children to see, to discriminate, to love nature in all her varied moods, and finally to love knowledge for its own sake. The introduction of this study in many schools is increasing the demand for teachers who are equipped to give proper instruction in the elementary principles of agriculture.

COLLEGE STUDENTS.—The aim in certain courses is to enable students now enrolled in the University to secure additional credit toward graduation and to give to others the opportunity to work off conditions standing against them. A glance at the subjects offered will suggest the possibilities in this particular.

ENTRANCE COURSES.—Certain other courses will enable graduates of recognized high schools whose courses do not meet entrance requirements to concentrate their time upon such work as, when satisfactorily completed, will furnish them with sufficient credits to matriculate.

LABORATORIES AND LIBRARY.—The laboratories of the University will be open to teachers who desire to pursue individual advanced work in the subjects offered. The library will be open also for the use of all students.

DAILY LECTURES—One of the leading features of the Summer Term will be a daily lecture for a portion of the hour from 9:30 to 10:30 A. M. in the lecture room of the Chemical Building. These lectures will be given by members of the Summer Term faculty, by members of the University Faculty, and by prominent public school superintendents.

STATE INSTITUTIONS.—It is worth while for Ohio teachers to become acquainted with the public state institutions. To that end, it is customary to organize Saturday excursions to visit the Capitol, the Penitentiary, the School for the Blind, the Institution for the Deaf and Dumb, the Institution for the Feeble Minded, and the State Hospital for the Insane.

OUTINGS.—The Botany and Geology and Physical Geography excursions will furnish most delightful outings to students in those departments. Last year Buckeye Lake, Yellow Springs, Sugar Grove, Glenmary Park, and other places of interest were visited.

TUITION.—The total expenses of a student for the entire term can be made very light. A general registration fee of six dollars will be charged each person. No other fees will be charged by the University. Some courses not offered by the faculty of the Summer Term will be given by special arrangement with different departments of the University. Where special courses are arranged a tuition fee will be charged and the amount of it will be determined by the instructor concerned.

ROOMS AND BOARD.—Many of the beautiful homes about the University grounds will be thrown open for the use of students of the Summer Term. Rooms accommodating two persons each can be obtained in these homes at prices varying from \$8 to \$12 per month. Rooms with board can be had from \$4 to \$5 per week. It is quite possible to cover all expenses of the term for \$35. Persons desiring to engage rooms and board should write at once to W. W. Boyd, Secretary Summer Term, Ohio State University, Columbus.

FACULTY OF THE SUMMER TERM

WILLIAM OXLEY THOMPSON, D. D., LL. D.,
President of the University.

ALFRED DODGE COLE, M. A.,
Professor of Physics and DEAN of the Summer Term.

WILLIAM W. BOYD, M. A.,
High School Visitor and SECRETARY of the Summer Term.

ALBERT G. BAUERSFELD,
Director of Manual Training, Thomas Hoyne Manual Training
High School, Chicago.

ROSSER DANIEL BOHANNAN, B. Sc., C. E., E. M.,
Professor of Mathematics.

EMILY E. BRACKEN,
Professor of Art.

SAMUEL CARROLL DERBY, M. A.,
Professor of Latin Language and Literature.

ROBERT F. EARHART, Ph. D.,
Assistant Professor of Physics.

WALLACE STEDMAN ELDEN, Ph. D.,
Associate Professor of Classic Languages.

CHARLES WILLIAM FOULK, B. A.,
Associate Professor of Chemistry.

THOMAS EWING FRENCH, M. E.,
Professor of Engineering Drawing.

WILLIAM LUCIUS GRAVES, M. A.,
Assistant Professor of English.

CHARLES HAUPERT, Ph. D.,
Superintendent of Schools, Wooster, O.

GEORGE D. HUBBARD, Ph. D.,
Assistant Professor of Geology.

OLIVE JONES, B. A.
University Librarian.

WILLIAM ASHBROOK KELLERMAN, Ph. D.,
Professor of Botany.

GEORGE WELLS KNIGHT, Ph. D.,
Professor of American History and Political Science.

DAVID R. MAJOR, Ph. D.,
Professor of Education

WILLIAM MCPHERSON, Ph. D.,
Professor of Chemistry.

FRANK WILSON MOODY, Ph. B.,
Instructor in Physics.

MARY L. OBERLIN,
Instructor in Domestic Science, Greenville, Ohio.

FRANCIS B. PEARSON, B. A.,
Principal of East High School, Columbus, Ohio.

SAMUEL EUGENE RASOR, B. Sc., M. A.,
Assistant Professor of Mathematics.

LEWIS ADDISON RHOADES, Ph. D.,
Professor of Germanic Languages and Literature.

MRS. ALICE F. ROLLINS,
Principal of Sheridan School, Minneapolis, Minn.

WILBUR HENRY SIEBERT, M. A.,
Professor of European History.

W. E. SIMONDS, Ph. D.,
Professor of English, Knox College, Galesburg, Ill.

KARL DALE SWARTZEL, M. Sc.,
Associate Professor of Mathematics.

JOSEPH RUSSELL TAYLOR, M. A.,
Associate Professor of English.

ALFRED VIVIAN, Ph. G.,
Professor of Agricultural Chemistry.

Lecturers.

J. W. CARR, A. M.,
Superintendent of Schools, Dayton, Ohio.

J. E. MORRIS, B. S.,
Superintendent of Schools, Alliance, Ohio.

W. McK. VANCE, A. M.,
Superintendent of Schools, Delaware, Ohio.

W. E. ROBERTS, A. M.,
Supervisor of Manual Training, Cleveland, O.

H. S. PIATT, Ph. D.,
Superintendent of Schools, Coshocton, Ohio.

A. B. GRAHAM,
Superintendent of Agricultural Extension, O. S. U.

ANNOUNCEMENT OF COURSES

AGRICULTURE

Soil Study.—Townshend Hall. Daily, 10:30 to 11:30. Professor VIVIAN.

This course will include recitations and practical exercises relating to the soil; its formation, composition, and physical properties; its improvement by cultivation, fertilization and drainage; its relation to heat, moisture, air, etc. Work will be done that can be duplicated in the school-room.

Plant and Animal Growth.—Townshend Hall. Daily, 8:30 to 9:30. Professor VIVIAN.

A study of how plants grow and how they obtain their food, selection of seeds, germination tests, and the effect of tillage and cultivation upon the development of the plant. This work will be supplemented as far as possible with simple experiments. The latter part of the term will be devoted to a simple study of the common types of farm animals.

AMERICAN HISTORY

The Teaching of American History.—Three credit hours. Room 205, University Hall. Daily, 8:30 to 9:30. Professor KNIGHT.

The aim of this course is to assist towards the successful teaching of American History and is intended for those who are already teaching or who are preparing to teach this subject in the secondary schools. No one who has not had at least a thorough high school course (or its equivalent) in American History and civics will be admitted to the course.

Advanced Political History.—Three credit hours. Room 205, University Hall. Daily, 10:30 to 11:30. Professor KNIGHT.

For graduate and qualified non-graduate students. The course will be devoted to intensive study of the period from 1850 to 1865 with special reference to slavery and its influence on events. It will consist in part of lectures and in part of work in the library by the student on books and documents in accordance with a prepared scheme of investigation under the guidance of, and in frequent conference with, the instructor, and in the preparation of notes and reports upon the results of such reading and investigation.

ART

Theory and Practice of Teaching and Supervising of Art in the Grade and High Schools.—Two credit hours. Hayes Hall. Daily, 7:30 to 9:30. Professor BRACKEN.

Pedagogical and psychological consideration of the subject in connection with nature, home, school, and society. Study of color and lines of growth in plant form. Perspective. Color and form in still-life groups. Action and proportion in human figure and animals. Landscape. Memory and imaginative drawing. Illustration. Study of harmonies of line, space, and color in design. Color theory and harmony. Conventionalization of nature forms for use in design. Composition and design with nature, still-life, and life motives. Charcoal, pencil, ink, and water color are the mediums used.

Advanced Composition and Design in Line, Dark and Light Color.—Two credit hours. Hayes Hall. Daily, 10:30 to 11:30. Professor BRACKEN.

Fitted to the needs of supervisors, high school teachers of art, and those especially interested in the study of design.

Drawing and Painting from Still-Life, Cast, Life, and Nature.—Two credit hours. Hayes Hall. Daily, 11:30 to 12:30. Professor BRACKEN.

Composition in connection with different subjects studied. This course is adapted to the needs of supervisors and those training for special work.

BOTANY

Elementary Botany.—Botanical Hall. Daily, 8:30 to 9:30. Professor KELLERMAN.

A course for beginners and those wishing credit for college entrance. Textbooks: Coulter's Elementary Botany and Kellerman's revised Spring Flora. Recitations and lectures supplemented by practical work, identifying plants, collecting and preparing specimens for the herbarium. Excursions on Saturdays.

Botany for Teachers.—Three credit hours. Botanical Hall. Daily, 11:30 to 12:30. Professor KELLERMAN.

A general course for those who have some knowledge of the subject. Lectures will be given on the more important topics in the various subdivisions of Botany. Special emphasis on vegetable physiology, dendrology (the native trees), mycology (the edible and poisonous mushrooms) and such subjects as more directly concern teachers—especially work for high school pupils and the school herbarium. On alternate days, there will be practice in the laboratory with compound microscopes. Some text-book and flora ought to be brought for daily consultation. Excursions on Saturdays.

CHEMISTRY

General Chemistry.—Three to eight credit hours. Chemical Building. Daily, 7:30 to 8:30. Laboratory hours to be arranged with the instructor. Professor McPHERSON.

This is an elementary course, although it is desirable that students entering it shall have had some training in the subject. Special attention will be given to such work as would be of advantage to teachers of chemistry in secondary schools. Lectures, recitations, and laboratory work.

Qualitative Analysis.—Three to eight credit hours. Chemical Building. Daily, 7:30 to 8:30. Laboratory hours to be arranged with the instructor. Associate Professor FOULK.

This is a general course in qualitative analysis. It presupposes a thorough understanding of elementary chemistry. Lectures and laboratory work.

Advanced Chemistry.—Three to eight credit hours. Chemical Building. Hours to be arranged with the instructors. Professor McPHERSON and Associate Professor FOULK.

This course is a general one arranged for students who wish to take work along more advanced lines, especially in quantitative analysis and organic chemistry. Individual courses will be mapped out to meet the needs and capabilities of the student. It is desirable that all students wishing to take advanced work correspond with the professor of chemistry so that the course may be arranged before the opening of the term.

DOMESTIC SCIENCE

The Teaching of Domestic Science.—Hayes Hall. Daily, 1:30 to 3:30. Miss OBERLIN.

(a) The equipment of a laboratory; the planning of a course of study suitable for seventh and eighth grade pupils; a study of the relative nutritive and money values of food materials. (b) Laboratory work includes practice in simple and wholesome methods of preparing and serving foods and practice in the care of the laboratory.

Theory and Practice of the Teaching of Domestic Science.—Hayes Hall. Daily, 3:30 to 5:30. Miss OBERLIN.

(a) The equipment of a laboratory; the planning of a course of study suitable for high school pupils with some knowledge of chemistry and physiology; a study of the needs of the body and how they may be supplied. (b) Laboratory work includes practice in the care of the laboratory; practice in the preparation and serving of various foods by more complicated methods.

EDUCATION

Educational Psychology.—Three credit hours. Chemical Building. Daily, 10:30 to 11:30. Professor MAJOR.

The work in this course will be based on James' Talks on Psychology, supplemented by references to standard psychological and educational literature.

Principles of Education.—Three credit hours. Chemical Building. Daily, 11:30 to 12:30. Professor MAJOR.

The chief purpose of this course is to enable the student to understand the nature of present day educational problems and to arouse interest in their critical study. The following topics will indicate the general nature of the course: Education as a science; the aim of education; educational values; psychology and education; the learning process; stages of mental development; the selection and arrangement of school studies. Lectures, readings, and discussions. Prerequisite: graduation from a first grade high school or equivalent.

History of Education.—Three credit hours. Chemical Building. Daily, 7:30 to 8:30. Superintendent HAUPERT.

This course reviews the most important educational systems and movements in order to discover the most valuable contributions to modern educational theory and practice. The course is planned to meet the needs of class teachers, supervisors, and superintendents.

Educational Classics.—Three credit hours. Chemical Building. Daily, 8:30 to 9:30. Superintendent HAUPERT.

The aim of this course will be to make critical and comparative study of such classics as Rousseau's *Emile*, Pestalozzi's *Leonard and Gertrude*, Froebel's *Education of Man*, Herbart's *Science of Education*, and Spencer's *Education*.

Administration of Public Education.—Three credit hours. Chemical Building. Daily, 8:30 to 9:30. Mr. BOYD.

This course is intended for superintendents, supervisors, and principals. The work is based on Chancellor's "Our Schools, Their Administration and Supervision," supplemented by references to standard books, educational reports, and literature on school equipment, organization, and management.

Secondary Education.—Three credit hours. Chemical Building. Daily, 10:30 to 11:30. Mr. BOYD.

It is intended to discuss fully the problems of the public high school, both in its relation to college entrance requirements and as a finishing school. A study will be made of the curriculum, organization, and administration of secondary education in the United States. This course is planned for high school teachers and those intending to teach in high schools who have had not less than two years of college work.

ENGLISH

Composition and Rhetoric.—Three credit hours. University Hall. Daily, 7:30 to 8:30. Assistant Professor GRAVES.

Daily themes. Each theme will be read, criticized, and returned to the writer. Scott and Denney's *Composition-Literature* will be used as a text-book. Outside reading of models will be required. Equivalent to one-half of University Course 1.

The Teaching of English.—University Hall. Daily, 11:30 to 12:30. Associate Professor TAYLOR.

The following topics will be discussed, partly by lecture and partly by reports on assigned readings: aims of English teaching; class-room methods; the function of criticism; the essay problem; plans for courses; the place of the text-book; the preparation of the teacher; the relation of composition work to the study of English classics; the recommendations of the English conferences; recent treatises on teaching English; methods of teaching various English classics. Equivalent to one-half of University Course 48.

Browning.—Three credit hours. University Hall. Daily, 10:30 to 11:30. Associate Professor TAYLOR.

Particular attention will be given to those selections from Browning that are prescribed for admission to college. Equivalent to University Course 20.

Tennyson.—Three credit hours. University Hall. Daily, 7:30 to 8:30. Professor SIMONDS.

The text preferred is the Macmillan edition. Equivalent to University Course 19.

English Classics.—Three credit hours. University Hall. Daily, 8:30 to 9:30. Professor SIMONDS.

A course for teachers in some of the English Classics prescribed for admission to college. Equivalent to one-half of University Course 48.

EUROPEAN HISTORY

The History of Rome.—Three credit hours. Room 204, University Hall. Daily, 8:30 to 9:30. Professor SIEBERT.

This course will present a study of the history of Rome to the fall of the Empire in the West (476, A. D.). Lectures and suggested reading, with comments on text-books, reference works, and methods.

The History of England.—Three credit hours. Room 204, University Hall. Daily, 7:30 to 8:30. Professor SIEBERT.

A survey from the earliest times to the Tudors (1485, A. D.). The introductory lectures will deal with recent books, methods, and helps. The later lectures will attempt to present the salient features of England's historical development, and to suggest collateral reading of value.

GEOGRAPHY

Physical Geography.—Orton Hall. Mondays, Tuesdays, Wednesdays, Thursdays, 11:30 to 12:30. Laboratory work, Tuesdays, 1:30 to 3:30. Field work Monday afternoons and occasional Saturdays, all day. Assistant Professor HUBBARD.

A practical course in modern physical geography, covering the origin, development, and classification of land forms, the atmosphere and the ocean. Some of the topics treated are rivers, valleys, plains, mountains, shore lines, glaciers; the ocean and its work; the atmosphere, its circulation and special storms. The course is illustrated with maps, models, and lantern slides. Lectures, recitations, and field work.

College Geography.—Two credit hours. Orton Hall. Mondays, Tuesdays, Wednesdays, Thursdays, 8:30 to 9:30. Assistant Professor HUBBARD.

Designed primarily for supervisors of geography and normal school teachers. The work comprises a study from the standpoint of cause and effect, of the physical structure, the climatic conditions, and the natural resources of a series of selected regions from the several continents. The underlying purpose is the understanding of the origin and nature of the geography of these type localities, and the extent and nature of the influence of physical conditions upon human occupation, industrial development, and the inter-relation of the various kinds of regions. By comparison, the principles found applicable in the type studies are extended to other parts of the earth. Lectures, collateral reading, reports.

Announcement.—Geographical Conference. Once each week those interested in geography teaching will meet for a free discussion of announced subjects under the direction of Professor Hubbard. The following subjects which have been used in similar conferences will give an idea of the nature of the work: (1) Field or excursion work. (2) Map and other laboratory work. (3) What is Geography? Its essential principles? (4) Selection of geographical material. (5) Teaching the seasons.

GERMAN

Elementary Course.—Four credit hours. Room 317, University Hall. Daily, 10:30 to 11:30. Professor RHOADES.

Translation of easy prose, review of the essentials of grammar, and exercises in writing German sentences. The course is the equivalent of the third term of the first year's work, but the needs of other students are considered.

German Classics.—Three credit hours. Room 317, University Hall. Daily, 11:30 to 12:30. Professor RHOADES.

Study of rather difficult prose and of a drama, with especial attention to the needs of teachers and to methods of teaching.

LATIN

Pliny's Letters.—Three credit hours. Room 306, University Hall. Daily, 8:30 to 9:30. Professor DERBY.

For students who have completed one year of college Latin. Westcott's Selected Letters of Pliny and Capes' Early Empire are recommended as text-books. In addition to syntax, translations, etc., some collateral study of Roman history will be necessary.

Roman Private Life.—Three credit hours. Room 306, University Hall. Daily, 7:30 to 8:30. Professor DERBY.

A series of discussions and lectures planned for teachers, college students, and graduates. Members of the class should provide themselves with Johnstone's Private Life of the Romans.

NOTE.—It is likely that similar courses in college Latin, following these in due order, will be given in 1908 and 1909.

Cicero's De Senectute et De Amicitia.—Three credit hours. Room 307, University Hall. Daily, 11:30 to 12:30. Associate Professor ELDEN.

The prerequisite for this course is college preparatory Latin.

Vergil.—Room 307, University Hall. Daily, 10:30 to 11:30. Associate Professor ELDEN.

This course will include the fifth and sixth books of the Aeneid. Careful attention will be paid to prosody and metrical reading, as well as to the translation, construction and forms of the Latin text. Greenough and Kittridge's edition of Vergil is recommended.

Cicero's Orations.—Room 307, University Hall. Daily, 8:30 to 9:30. Principal PEARSON.

This course will be adapted to students who have completed four books of Caesar, or their equivalent, and will include at least the orations, De Imperio Pompei and Pro Archia. Attention will

be paid to the rhetorical structure and political antiquities of these speeches as well as to the usual subjects of study: pronunciation, translation, syntax, and historical allusions.

Caesar.—Room 307, University Hall. Daily, 10:30 to 11:30. Principal PEARSON.

This course is intended for students who have read two books of Caesar or an equivalent. The third and fourth books of Caesar's Gallic War will be read. The principles of syntax will be thoroughly and systematically reviewed and considerable time will be devoted to the study of military antiquities.

MANUAL TRAINING

The Teaching and Supervising of Manual Training in the Primary Grades.—Hayes Hall. Daily, 1:30 to 3:30. Mrs. ROLLINS.

This course deals with the problems of the special teacher or supervisor regarding the forms of industrial work that are most practicable and educational for the lower grades of the elementary schools. The lines of work studied include weaving, basketry, construction in paper and card-board, and clay modeling.

The Organization and Supervision of Manual Training in the Grammar Grades.—Hayes Hall. Daily, 3:30 to 5:30. Mrs. ROLLINS.

This course attempts to give to elementary teachers a conception of the time, place, and character of industrial work in an elementary course of study. A study will be made of methods and practices now in use in American schools, of equipments, cost, and plans. Such materials will be used as are adapted to the fifth, sixth, seventh, and eighth grades of public school work.

The Teaching of Manual Training in the High School.—Hayes Hall. Daily, 2:30 to 5:30. Mr. BAUERSFELD.

It is intended to make this course helpful to superintendents, principals, and teachers in high schools in equipping their schools for manual training work and in arranging courses of study. The course is planned to cover the fundamental processes of bench work in wood as obtained through the making of useful small articles, experimental apparatus, and simple cabinet work. Emphasis will be laid upon the drawing of working sketches and the sharpening and care of edged tools.

Theory and Practice of the Teaching of Manual Training.—Hayes Hall. Daily, 1:30 to 2:30. Mr. BAUERSFELD.

The following topics will be discussed partly by lecture and partly by reports on assigned readings: the history of manual training in the United States with some reference to foreign coun-

tries; development and organization of construction work in different kinds and grades of schools; management of manual training classes and courses of study; educational values of different kinds of work as determining their place in the course of study; the relation of manual work to other courses in the school curriculum; where and how to start manual training under conditions of limited appropriations; equipments and supplies for different kinds of work in construction.

MATHEMATICS

Analytical Geometry.—Five credit hours. Page Hall. Daily, 7:30 to 8:30. Professor BOHANNAN.

Ashton's text-book will be used.

Integral Calculus.—Five credit hours. Page Hall. Daily, 8:30 to 9:30. Professor BOHANNAN.

Osborne's text-book will be used.

Teachers' Course.—Page Hall. Daily, 11:30 to 12:30. Associate Professor SWARTZEL.

This course is intended primarily for teachers in the public schools, and will give particular attention to the discussion of methods of teaching. About one-half of the time will be given to Algebra, and the other half to Geometry.

Plane Geometry.—Page Hall. Daily, 10:30 to 11:30. Associate Professor SWARTZEL.

Wentworth's text-book will be used.

Solid Geometry.—Page Hall. Daily, 7:30 to 8:30. Assistant Professor RASOR.

Wentworth's text-book will be used.

Entrance Algebra.—Page Hall. Daily, 8:30 to 9:30. Assistant Professor RASOR.

Wentworth's Elements of Algebra will be used. This course will be run in two sections, reciting at the same hour. One section will cover the work required in the "first unit," and the other that of the "second unit" of Algebra of the University entrance requirements.

MECHANICAL DRAWING

Projection Drawing.—Three credit hours. Brown Hall. Daily, 1:30 to 3:30. Professor FRENCH.

Orthographic, isometric, and oblique projection and elementary working drawing. This course will be available for students desiring University credit. It will afford also practice work for teachers.

The Teaching of Mechanical Drawing.—Brown Hall. Daily, 3:30 to 5:30. Professor FRENCH.

A course for supervisors and teachers in high schools and manual training schools. Lectures and practice work.

PHYSICS

The Teaching of Physics.—Three credit hours. Physics Building. Daily, 8:30 to 9:30. Professor COLE.

This course is especially designed for teachers of Physics in high schools and those who intend to become such. Different methods of presenting the subject which are now in use will be explained, compared, and criticized. Those taking this course should have had a year of work in elementary physics and, in addition, either a half year of college physics or a year's experience in teaching the subject in a secondary school.

Advanced Laboratory Physics.—Three credit hours. Physics Building. Daily, 1:30 to 3:30. Professor COLE.

This is a more advanced course than the preceding, consisting of exercises designed to illustrate the methods employed in exact measurements and to give skill in the practical manipulation of physical instruments. As a prerequisite to this course, a year's work in physics in a secondary school, familiarity with plane trigonometry, and at least half a year of college physics will be needed.

College Entrance Physics.—Mechanics and Heat: Physics Building. Daily, 7:30 to 8:30; and Mondays and Fridays, 8:30 to 9:30. Laboratory, Tuesdays and Thursdays, 1:30 to 4:30. Assistant Professor EARTHART.

College Entrance Physics.—Sound, Light, Electricity: Physics Building. Daily, 10:30 to 11:30; and Tuesdays and Thursdays, 11:30 to 12:30. Laboratory, Mondays and Wednesdays, 1:30 to 4:30. Mr. MOODY.

These two courses are designed for those whose high school course has been incomplete to bring up their entrance requirements for college. They will be helpful also to teachers who wish to extend the list of subjects covered by their certificates, but who are not prepared to take the course on "The Teaching of Physics." It is possible for a person to take the two courses at the same time, provided all the time is given to the work.

Special Courses

Under this heading, announcement is made of such courses as it is known can be arranged with the instructor in charge. It is possible that other courses might be arranged, if students will make known their desires. The fees and hours for these courses must be arranged between the students and instructors concerned.

Drawing.—Descriptive geometry and technical drawing, equivalent to University Courses 31, 32, 34, and 36. Fee, \$10.00. Mr ROGERS.

German—

1. An elementary course corresponding to the first and second terms of German. Drill in forms and translations, with special attention to correct pronunciation. Daily. Hours to be arranged. Regarding fees see the instructor. University Hall. Dr. BUSSE.

2. Social and literary conditions and institutions of modern Germany (German city life, University study, theatre, parliament, etc.). Lectures and reading. The course will be conducted entirely in German. Concerning hours and fees see the instructor. University Hall. Dr. BUSSE.

3. A course in the practice of speaking and writing German for those who are familiar with the elements of the language. Regarding hours and fees see the instructor. University Hall. Dr. BUSSE.

DAILY

	7:30 to 8:30	8:30 to 9:30.	9:30 to 10:30	10:30 to 11:30
1	MR. BAUERSFELD.....		Popular Lectures for all Students.	
2	Prof. BOHANNAN.....	Analytical Geometry		
3	Mr. BOYD.....			Secondary Education
4	Prof. BRACKEN.....	Theory and Practice of Art		Design
5	Prof. COLE.....			
6	Prof. DERBY.....	Roman Private Life		
7	Prof. EARHART.....	Entrance Physics		
8	Prof. ELDEN			Vergil
9	Prof. FOULK.....	Qualitative Analysis		
10	Prof. FRENCH.....			
11	Prof. GRAVES.....	Composition and Rhetoric		
12	Mr. HAUPERT.....	History of Education		
13	Prof. HUBBARD.....			
14	Prof. KELLERMAN.....			
15	Prof. KNIGHT.....			Advanced Political History
16	Prof. MAJOR.....			Educational Psychology
17	Prof. MCPHERSON.....	General Chemistry		
18	Mr. MOODY.....			Entrance Physics
19	MISS OBERLIN.....			
20	Mr. PEARSON.....			Caesar
21	Prof. RASOR.....	Solid Geometry		
22	Prof. RHOADES.....			Elementary German
23	Mrs. ROLLINS.....			
24	Prof. SIEBERT.....	History of England		
25	Prof. SIMONDS.....	Tennyson		
26	Prof. SWARTZEL.....			Plane Geometry
27	Prof. TAYLOR.....			Browning
28	Prof. VIVIAN.....			Soil Study
		Plant and Animal Growth		

SCHEDULE

11:30 to 12:30	1:30 to 2:30	2:30 to 3:30	3:30 to 4:30	4:30 to 5:30	
	Theory & Practice of Manual Train'g	Manual Training in the High School.			1
					2
					3
Painting					4
	Advanced Laboratory Physics				5
					6
	Laboratory work in College Entrance Physics				7
Cicero's De Senectute					8
	Laboratory Work in Chemistry				9
	Projection Drawing	Teaching of Mechanical Drawing			10
					11
					12
Physical Geography	Field and Laboratory, Monday and Tuesday				13
Botany for Teachers					14
					15
Principles of Education					16
	Laboratory Work in Chemistry				17
	Laboratory Work in College Entrance Physics				18
	Teaching of Domestic Science	Theory and Practice of Domestic Science			19
					20
					21
German Classics					22
	Manual Training for Primary Grades	Manual Training for Grammar Grades			23
					24
					25
Teachers' Course in Mathematics					26
Teaching of English					27
					28